

March 7, 2006

Robert Stone, CHMM, Hazardous Materials Specialist Humboldt County Department of Health Division of Environmental Health 100 H Street, Suite 100 Eureka, California 95501

RE:

SSI Workplan Addendum No. 1

Blue Lake 76, 291 Blue Lake Boulevard, Blue Lake, California 95525

LOP# 12509

Dear Mr. Stone:

Previous investigations at the Big Oil & Tire Company, Blue Lake 76 facility at 291 Blue Lake Boulevard, Blue Lake, California, have determined that groundwater contamination that originated from the facility's underground storage tank (UST) system has migrated to the south, beneath Blue Lake Boulevard and on to private property on the south side of the road. The work conducted to date has delineated the lateral extent of the soil contamination, but has not fully delineated the full extent of the groundwater that is impacted with petroleum hydrocarbons.

In November 2005, a Work Plan was prepared that proposed the drilling, sampling, and installation of six (6) groundwater monitoring wells. Of the wells, five (5) would be offsite, on the south side of Blue Lake Boulevard, and the sixth would be located on the site to replace former monitoring well MW-1. However, following discussions with HCDEH staff on January 4, 2006, and in an effect to provide a more economic approach, and obtain additional data, it was decided to modify the original proposed scope of work.

Revised Scope of Work

The scope of the originally proposed investigation consisted of the drilling, sampling, and installing six (6) groundwater monitoring wells to assist with the delineation of the lateral and vertical extent of the groundwater contamination. The originally proposed sampling locations are shown in Figure 1. Using the collected data in cooperation with the data from the previous investigations, a Report of Findings (RoF) would be prepared that would document the activities and findings of the investigation.

Based on the conversation with HCEHD personnel, it is proposed to modify the scope of work with the initial drilling and sampling of 10 offsite and one (1) onsite borings for groundwater samples, and changing the number and locations of some of the proposed wells. The revised scope of work is as follows, with the revised sampling locations shown in Figures 2 and 3.

- A Geoprobe or similar type boring (PB-22) will be drilled, west of previous boring B-10 (Total Petroleum Hydrocarbons as Gasoline (TPHg) reported at 2,530 ppb in the May 2002 investigation), see Figure 2. The objective of this boring will be to determine the on-site western extent of contaminant plume. The boring will be drilled to a depth of approximately 14 feet below ground surface (bgs), however, the actual depth will be determined in the field, but will extent approximately three (3) feet below the water table. A temporary well will be installed in the boring to allow for the collection of a grab groundwater sample. Following the collection of the groundwater sample, the temporary well casing will be removed, and the boring will be abandon, by filling it with a bentonite grout. Soil samples will be collected at four (4) or five (5) feet intervals (depending on drilling method) to evaluate subsurface geology, however, no soil samples will be retained for laboratory analysis. The grab groundwater sample from the boring will be analyzed for TPHg; benzene, toluene, ethylbenzene, xylenes (BTEX); and fuel oxygenates.
- Proposed monitoring wells PMW-5, will be drilled, sampled, and installed as outlined in the original Work Plan. See Figure 3

- Originally proposed monitoring well PMW-7, was located approximately 70 feet due west of previous boring B-11 (TPHg reported at 10,600 ppb in the May 2002 investigation). Due to a concern that this well may not be located at the lateral margin of the plume, it is proposed that two (2) borings (PB-23 and PB-24) be drilled and grab groundwater sample be collected prior to determining the final location of PMW-7. Both PB-23 and PB-24 will be drilled, sampled, analyzed, and abandon in the same manner as PB-22 (see previous info in first bullet). All collected groundwater samples will be subject to field screening to assist in the determination of the need for additional borings and the ultimate placement of the well. Field screening will be conducted by half filling an eight-ounce pre-cleaned screw top glass container, sealing the containing with a foil cover and lid, agitating the contents, after which the top is removed, and the probe of a portable PID gas analyzer is inserted through the foil to obtain a reading of any volatile hydrocarbons. If field screening reports significant hydrocarbons, a step out boring from PB-24 will be considered otherwise the boring will be placed as shown in Figure 2. The final location of PMW-7 will be determined based upon field screening, subsequent laboratory analytical results, and surface conditions, i.e. presence of utilities, but with the intension of determining the lateral extent of the groundwater contamination. Figures 2 and 3.
- Proposed monitoring wells PMW-8 will remain in its proposed general locations, but will be moved approximately 10 feet to the east, to the east side of previous boring B-12. However, additional borings (PB-25 and PB-26) will be drilled for the collection and analysis of groundwater at mid-points between previous borings B-11 and B-12, and borings B-12 and B-13. The purpose of these borings will be to further assist in the determination of the lateral delineation of the groundwater contamination. Borings PB-25 and PB-26 will be drilled, sampled, screened, analyzed, and abandon in the same manner as borings PB-23 and PB-24 (see above). See Figure 2 and 3.
- Proposed monitoring well PMW-6, located adjacent to well DW-1, will be drilled, sampled, and installed, as presented in the original Work Plan. See Figure 3.

The area south of proposed locations PB-23 through PB-26 and PMW-7 and PMW-8 is private property, and although groundwater contamination is present and needs to be evaluated, it is proposed that there is minimal long term impact to the properties, i.e. limit the number of groundwater monitoring wells. Therefore, it is proposed that further grab groundwater sampling be conducted, to ensure the maximum benefit of any new groundwater monitoring well. Current data indicated that the groundwater contamination is not east of the north-south line created by the non-detect TPHg values at previous locations B-18 and B-19. Groundwater contamination was reported at location B-16 (TPHg at 2,300 ppb); however, the full downgradient and lateral extent of the groundwater contamination south of Blue Lake Boulevard has not been determined; it is, therefore, proposed to drill and sample groundwater from a number of borings prior to finalizing the locations of additional monitoring wells.

To assess the extent of the groundwater contamination, borings are initially proposed at the following locations: southeast of proposed monitoring well PMW-6 (PB-27); between the two private residences southeast of proposed monitoring well PMW-6 (PB-28); the site of proposed well PMW-10 (PB-32); at the site of former boring B-17, which previously was not deep enough to encounter groundwater (PB-31); at a mid-point between previous borings B-16 and B-17 (PB-29); and approximately 45 feet west of previous boring B-16 (PB-30). All borings will be treated in the same manner as the borings presented above, with the need for any "step-out" borings being determined on field screening results. Any step-out borings will be discussed and approved with the HCDEH prior to installation. The final locations of all borings will be dependent on the locations of both underground and overhead utility lines, access to the proposed drilling locations, and with the agreement with the property owner. Based upon the results of the groundwater samples from the borings, groundwater monitoring wells will be installed. These will likely include two (2) cross gradient wells and one (1) downgradient well. Proposed monitoring wells PMW-9 and PMW-10, as presented in the original Work Plan will both likely be relocated based upon the results from the proposed borings. See Figures 2 and 3.

It is currently proposed to conduct this work in two (2) phases, with the monitoring wells being installed following the receipt of the analytical results of the groundwater samples from the borings, which would be conducted on a normal turnaround basis. However, if it is determined that it would be more economical to conduct accelerated turnaround on the sample analyses, rather than the remobilization of the drilling contractor, the work will be conducted during a single field event. This will be determined, following the approval of this revised scope of work by HCEHD.

All other aspects of the proposed scope of work, including the proposed schedule will be implemented in accordance with the previously approved Work Plan and this Addendum. The process of implementing the work will commence, upon receipt of your approval of this addendum, and SounPacific will contact your office a minimum of five (5) days prior to the implementation of any field work. Finally, during your review of this addendum, if you have any questions or concerns, please do not hesitate to contact me.

Sincerely

Michael Sellens, RG # 4714, REA # 0789

Principal Geologist

cc. Mr. Rich Pomrehn, Big Oil & Tire Company, Inc.





